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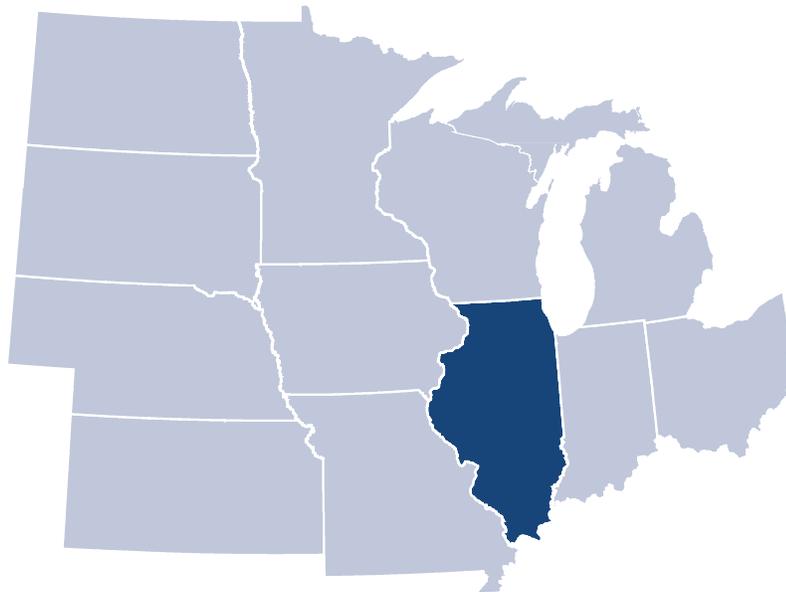
MIDWEST MANUFACTURING SNAPSHOT: ILLINOIS

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This state handout is an excerpt from the WRI working paper entitled “Midwest Manufacturing Snapshot: Energy Use and Efficiency Policies”. The working paper presents comprehensive manufacturing energy-use and economic-activity data along with state-by-state policy summaries for the 10 member states of the Midwestern Governors Association (MGA).¹ For more information on Midwest region manufacturing, the methods used to derive the data, and policy background, please see the full working paper at: <http://www.wri.org/publication/midwest-manufacturing-snapshot>.

1. Member states of the MGA are Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Ohio, South Dakota, and Wisconsin.

ILLINOIS



In 2006 Illinois consumed 4.0 Quads of energy—more than any other state in the Midwest. Industry plays a central role in Illinois energy use, economic activity, and employment. Figure IL-1 shows the breakdown of statewide energy used for fuel and feed-stock. Industry consumed more energy in Illinois than any other end-use sector. Within the broader category of industry, manufacturing accounted for two-thirds of total energy use in 2006.

Within manufacturing, petroleum and coal product manufacturing accounted for the largest share of Illinois energy use in 2006, followed by primary metals, chemicals, and food processing.

Illinois has 1.4 GW of total installed CHP capacity,^{IL-1} which is equivalent to 3% of total installed electricity generation capacity, versus the national average of 8%. Within total CHP, the remaining technical potential for industry CHP in Illinois is estimated to be more than four times larger than currently installed industrial capacity (Hedman, 2010).

IL-1 This number is higher than the installed CHP capacity number in Figure 9 because it includes all CHP installations (i.e., industrial, commercial, and institutional).

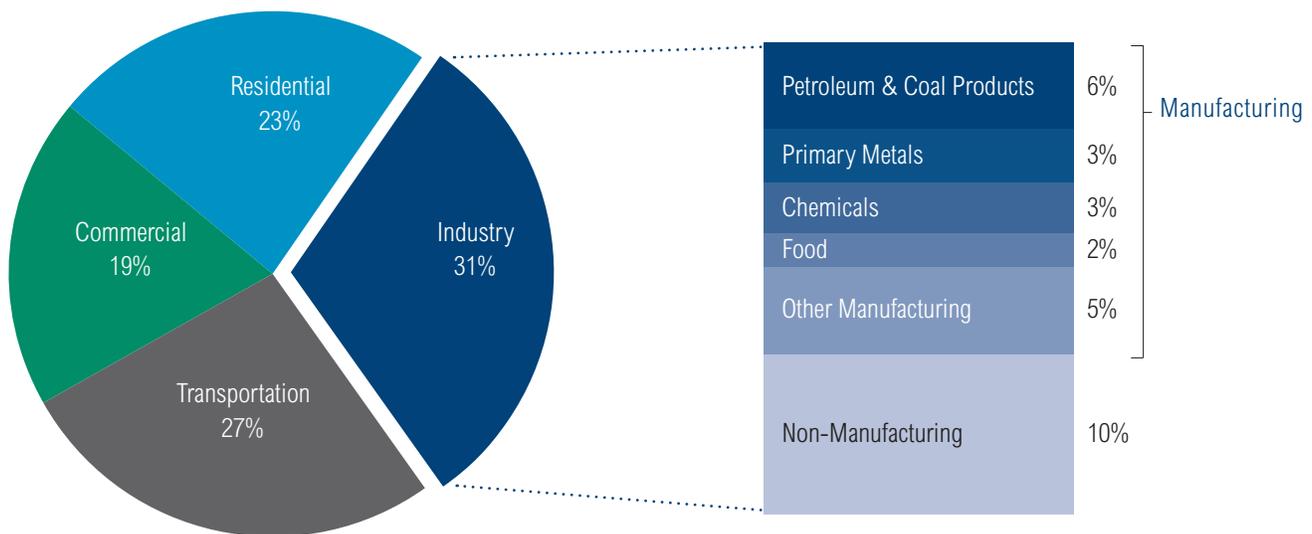
Illinois manufacturing energy expenditures (shown by “cost of fuels & electricity” in Figure IL-2) followed the national trend of peaking in 2008. Between 2000 and 2010, the index of manufacturing energy costs rose more quickly than the value of shipments index (Figure IL-2). The average difference between these two series over the period is 11%. By 2010 Illinois manufacturing energy expenditures had increased by 25%, while the total value of shipments rose by more than 10%, relative to year 2000 levels. Over the same 10-year period, Illinois manufacturing employment dropped by 34%—from 880,000 to 582,000, compared to the national manufacturing employment decline of 37% over the same period (Figure 1).

Table IL-1 | **Illinois Industry Delivered Energy Annual Average Prices (2010)**

	ELECTRICITY (cents/kWh)	NATURAL GAS (\$/1,000 ft ³)	COAL (\$/short ton)
Illinois	6.82	7.13	50.05
Midwest average	6.19	6.66	50.68
U.S. average	6.77	5.49	59.28

SOURCE: U.S. Energy Information Administration; for details see Appendix.

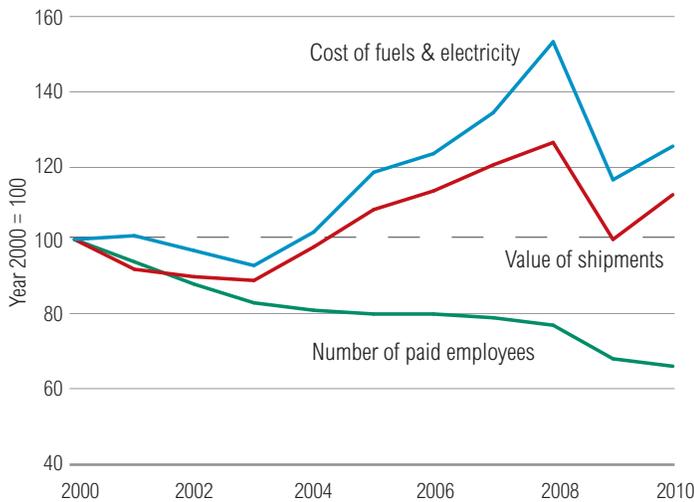
Figure IL-1 | **Illinois Total Energy Use, 2006**



Total Energy Use: 4.0 Quads

SOURCES: MECS; ASM; SEDS.

Figure IL-2 | **Index of Illinois Manufacturing Energy Cost, Value of Shipments, and Employment (2000-2010)**



SOURCE: ASM; BEA (employment)
NOTE: 2002 ASM values were linearly interpolated due to a gap in the published data.

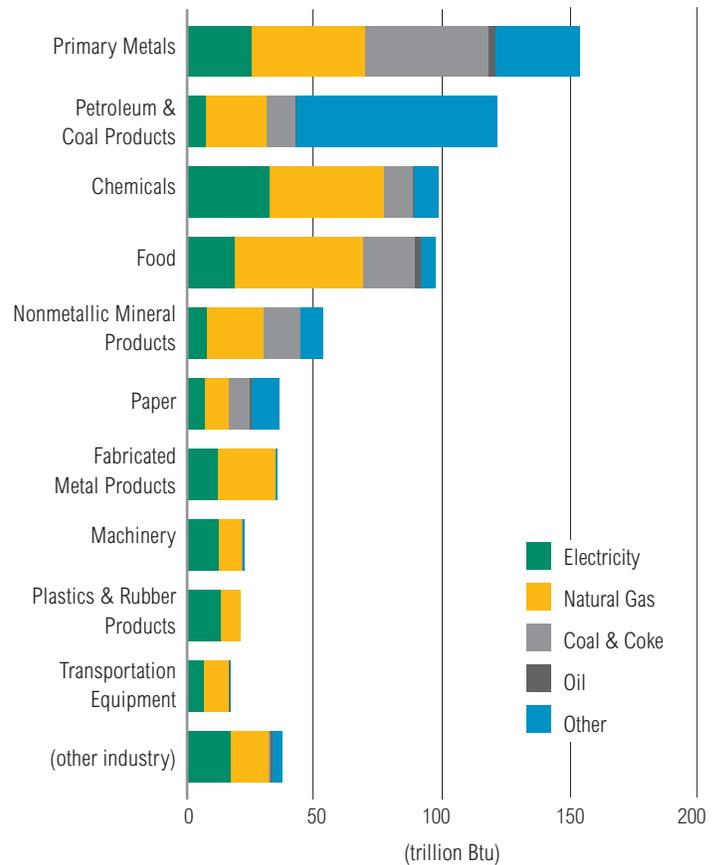
Energy prices influence demand and end-use efficiency. Table IL-1 shows Illinois, regional, and U.S.-average industry prices for electricity, natural gas, and coal. Whereas reported Illinois delivered coal prices were 16% lower than the national average, electricity was slightly more expensive and natural gas cost almost one-third more than the national average. Prices vary by end user and time of use, but the volatility of energy expenditures and this snapshot of 2010 prices suggest that Illinois industry faces a mixed picture among different fuels.

In 2006 Illinois manufacturing consumed 680 trillion Btu^{IL-2} of energy for fuel use—second only to Ohio in the Midwest. Figure IL-3 shows the breakdown of Illinois manufacturing fuel use by subsector (not including energy used as feedstocks). Combined, primary metals manufacturing and petroleum and coal products manufacturing accounted for 40% of Illinois manufacturing fuel use in 2006.

Industrial energy efficiency policy took a major step forward in 2007, when the Illinois legislature passed S.B. 1592, which enacted a range of significant energy policies, including several efficiency measures with relevance to state manufacturers.

IL-2 For energy unit conversion, 1,000 trillion Btu is equivalent to 1 Quad of energy.

Figure IL-3 | **Illinois Manufacturing Fuel Use by Sector, 2006**



SOURCES: MECS; ASM.

Table IL-2 | **Illinois Key Energy and Environmental Policies**

ILLINOIS	
REGULATORY ENVIRONMENT	
Renewable energy standard	The Illinois Renewable Energy Standard does not allow EE technologies or measures to qualify for compliance (DSIRE).
Energy efficiency resource standard	S.B. 1592 established an Energy Efficiency Resource Standard, which requires both electric and natural gas utilities to set annual energy-savings goals by reducing both energy delivered and peak demand. Under the rule, electric utilities are required to achieve 0.2% annual savings in 2008, increasing to 1% in 2012 and 2% in 2015 and thereafter. Natural gas utilities must achieve 0.2% annual savings in 2011, increasing to 1.5% in 2019, for an 8.5% cumulative savings by 2020 (DSIRE; ACEEE).
Emissions control programs	In 2007, the Illinois Pollution Control Board adopted CAIR through a state rulemaking process that included two provisions recognizing industrial EE. The state rule included output-based standards for regulating NO _x and SO ₂ emissions. Also, NO _x allowances were set aside to support EE projects, including combined heat and power technologies. ^a However, these rules are to be phased out in 2012. ^b
Alternative business models	In February 2008, North Shore Gas and Peoples Gas and Coke were both approved for four-year revenue-per-customer decoupling pilots (ACEEE).
Grid access	Pursuant to S.B. 680, passed in 2007, the Illinois Commerce Commission established interconnection standards for distributed generation facilities, including CHP systems, with capacity ratings under 10 MW (consistent with IEEE 1547 technical standards). In 2010, the ICC set a separate set of rules, including standard agreements, for distributed generators over 10 MW (DSIRE).
FINANCIAL AND TECHNICAL ASSISTANCE	
Grants or loans	Since 1997, the Illinois Department of Commerce and Economic Opportunity (DCEO) has administered the Biogas and Biomass to Energy Grant Program. Projects eligible for 50% cost-share grants must be part of CHP systems and must be located in Illinois. The maximum grants available for feasibility studies, biogas projects, and biomass projects are \$2,500, \$225,000, and \$500,000, respectively. The program expires April 30, 2012 (DSIRE).
Tax Incentives	There are no Illinois state tax incentives available for industrial EE.
Technical assistance	The DCEO offers the Large-Customer Energy Analysis Program (LEAP) to large energy users, including manufacturers, to help them manage and reduce energy costs through cost-effective efficiency improvements. Funded through the state EEPs Surcharge (for facilities located inside of ComEd or Ameren utility service territories) the LEAP offers a three-step energy management planning program, plus guidance regarding financial incentives that large energy users may access through state or utility EE programs. ^c The Industrial Assessment Center at Bradley University provides qualified manufacturers with free assessments and recommendations to improve energy efficiency. ^d The Energy Resources Center at University of Illinois at Chicago also provides resources on industrial energy efficiency and CHP. ^e
UTILITY PROGRAMS	
Customer EE programs, with cost-recovery	The Illinois Energy Efficiency Trust Fund, supported through an electric utility surcharge, does not support industrial EE projects (DSIRE). Illinois natural gas and electric utilities offer their customers a range of energy efficiency rebate programs (DSIRE).
EE as a resource	S.B. 1592 requires electric utilities to use cost-effective EE and demand-response measures to reduce direct and indirect costs to consumers. This can be accomplished by avoiding or delaying the need for new generation, transmission, and distribution infrastructure (ACEEE).

SOURCE: “ACEEE” refers to the American Council for an Energy Efficient Economy website: <http://www.aceee.org/sector/state-policy> (February, 2012); “DSIRE” refers to the Database of State Incentives for Renewables and Energy Efficiency website: <http://www.dsireusa.org>. (February, 2012).

- a <http://www.aceee.org/sector/state-policy/illinois/output-based-emissions-regulations> (February, 2012).; <http://www.ipcb.state.il.us/documents/dsweb/Get/Document-58394/> (February, 2012).
- b The first compliance phase for CAIR’s replacement, the Cross-State Air Pollution Rule (CSAPR), had been scheduled to go into effect in January 2012. In December 2011, the United States Court of Appeals for the D.C. Circuit stayed CSAPR and is scheduled to hear the case in April 2012. Meanwhile, EPA is facilitating a transition back to CAIR. <http://epa.gov/airtransport/>
- c http://www.commerce.state.il.us/dceo/Bureaus/Energy/Recycling/Energy+Efficiency/meep_program.htm. (February, 2012).
- d <http://www.bradley.edu/academics/eng/Mechanical/iac/main.htm> (February 2012)
- e <http://www.erc.uic.edu/projects/industrial.htm> (February 2012)



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